



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS



# Autonomic Logistics (AL)

## CBM+

### 28 Nov 2007

Eugene L. Morin, AL Project  
Lead  
Marine Corps Systems  
Command  
[Eugene.l.morin@usmc.mil](mailto:Eugene.l.morin@usmc.mil)



# AL Status

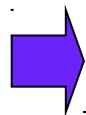
- MS A
- CDD entering JCIDS as TALC
- MS B 3<sup>rd</sup> Qtr 08
- Embedded Platform Logistics System (EPLS)
- Electronic Maintenance Support System (EMSS)



# AL Objectives

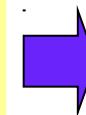
## Enables Condition Based Maintenance (CBM+)

- Autonomically collects and reports platform health data to operators and maintainers



- Reduces manual analysis and provides more accuracy to diagnostics
- Supports development of prognostics

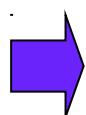
Improve life cycle affordability



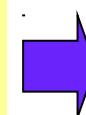
- Enables establishment of responsive demand and support networks that bring speed and quality to the logistics process in the operating environment

## Enhances Visibility for the Logistician

- Communicates logistics requirements data in a time relevant manner



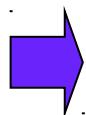
- Supports matching of resources against anticipated logistics requirements
- Enhances monitoring of joint logistics performance



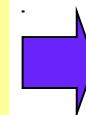
- Reduces maintenance cost and down time, and increases operational readiness

## Supports Quicker, Better Informed C2 Decisions

- Communicates platform operational health/readiness and logistics information



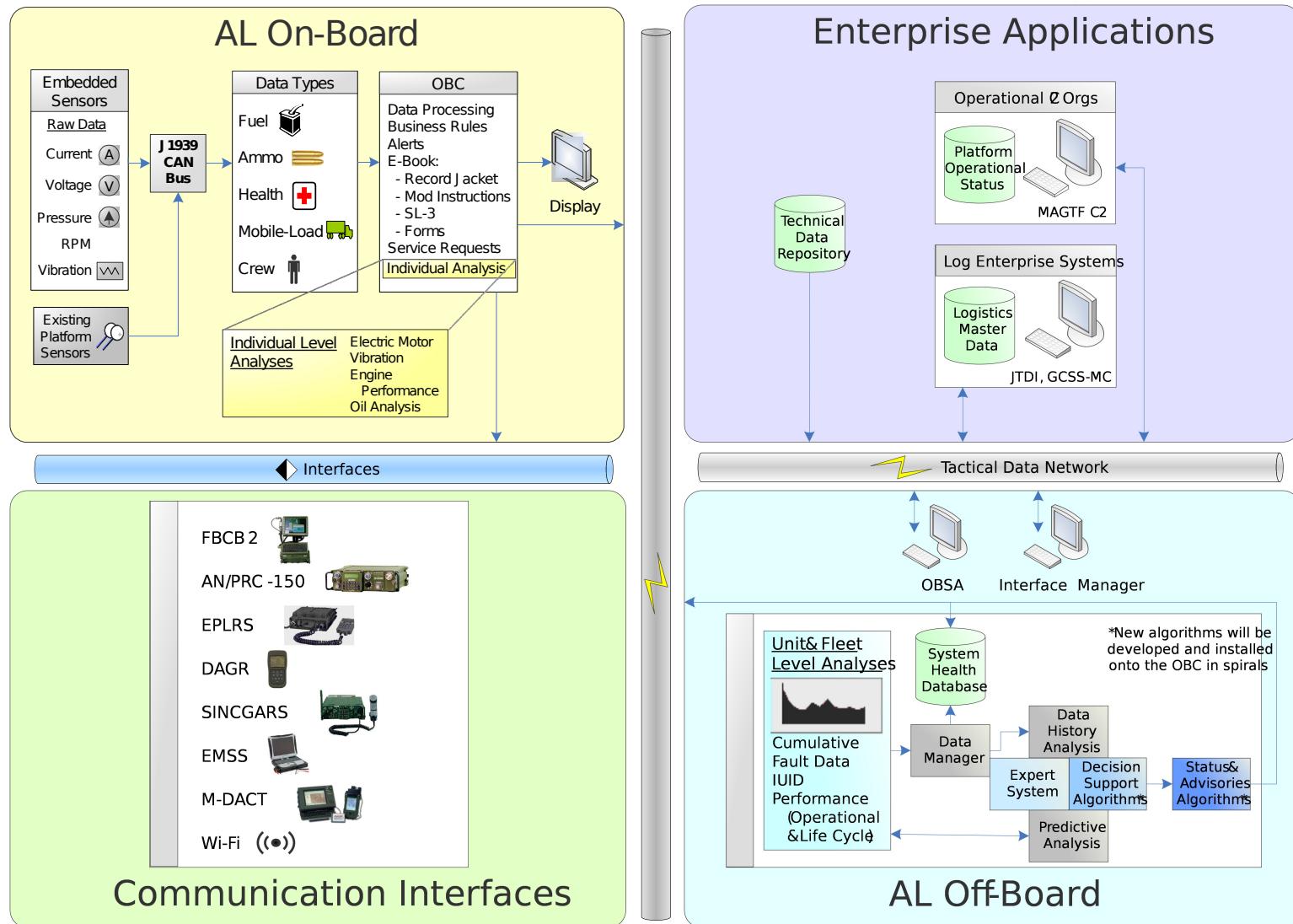
- Accelerates information to decision-makers
- Informs supportability assessments to the Joint Force Commander



- Allows commanders to leverage resources to maximize warfighting

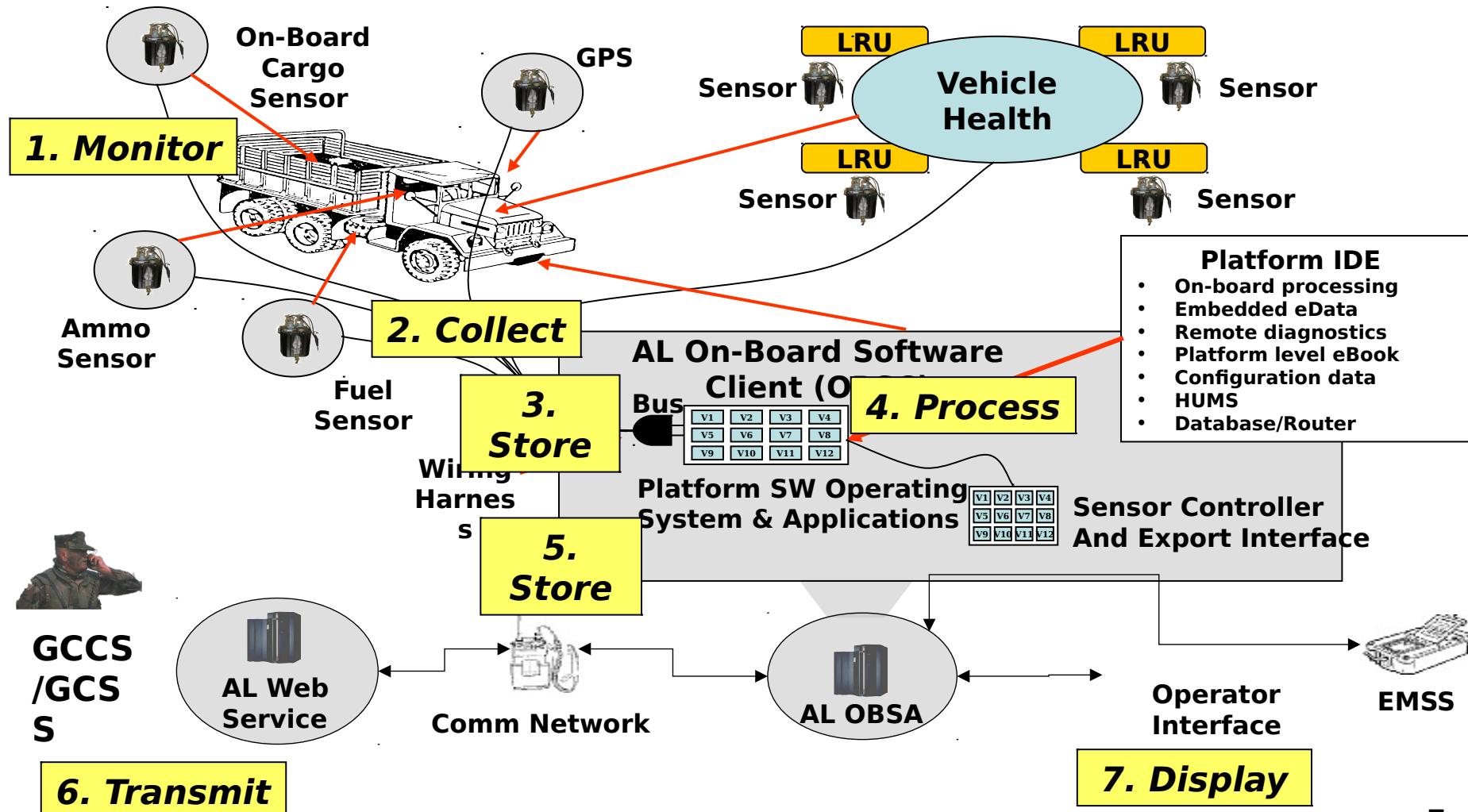


# AL System Diagram





# AL Functions



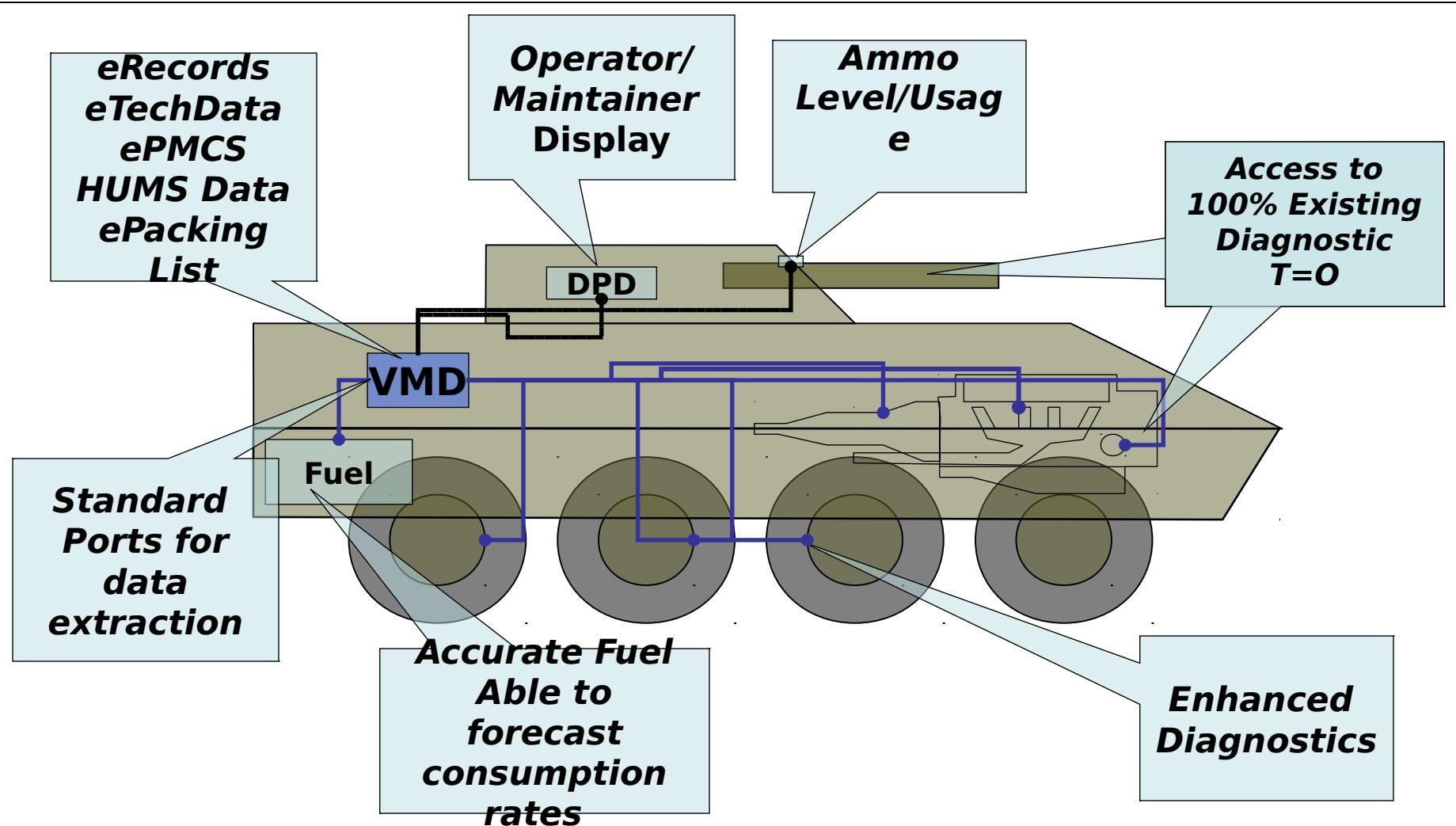


# EPLS

- Supplemental Funded
- Contract Awarded to LMCO Orlando, FL
  - \$144.8M contract
  - 878 LAV
  - 1057 AAV
  - 5204 MTVR
- Major system components
  - Sensors
  - Data Bus
  - Vehicle Manager Device
  - Driver Display Panel
  - On Board Software Client
  - Off Board Service Application



# Embedded Platform Logistics





# EPLS System Overview

## ON-BOARD



AAV



LAV



MTVR

### Driver

- Accurate vehicle status
- Proactive alerts
- Automated checklists and forms

OBSA - Store & Forward

### Vehicle Commander

- Improved diagnostics
- Vehicle awareness
- Track mobile loads
- Access to vehicle

Commonwealth VIETMS

## OFF-BOARD

### Enterprise - Main (Redstone)



### OBSA Applications



### EMSS

### Architecture Database Replication



### OBSA Applications



Battalion / Mid-Tier

## Commanders & Logisticians

- Situational awareness of vehicle readiness
- Access to accurate vehicle fault information and diagnostics
- Ability to anticipate logistics needs
- GCSS Request for Service
- Reporting and data mining
- \$\$\$ savings

Flexible Solution



# EMSS

- Marine Corps PMA
- CDD
  - Entering JCIDS 2<sup>nd</sup> quarter 08
  - NAVAIR JTDI
- Concept
  - Server
  - PEDD
  - Augment with COTS TMDE
  - Interfaces with EPLS, AL, GCSS



MARINE CORPS SYSTEMS COMMAND

UNITED STATES MARINE CORPS

# Electronic Maintenance Support System



Top Tier  
Huntsville



Regional



Bn Level



11XX

13XX

21XX

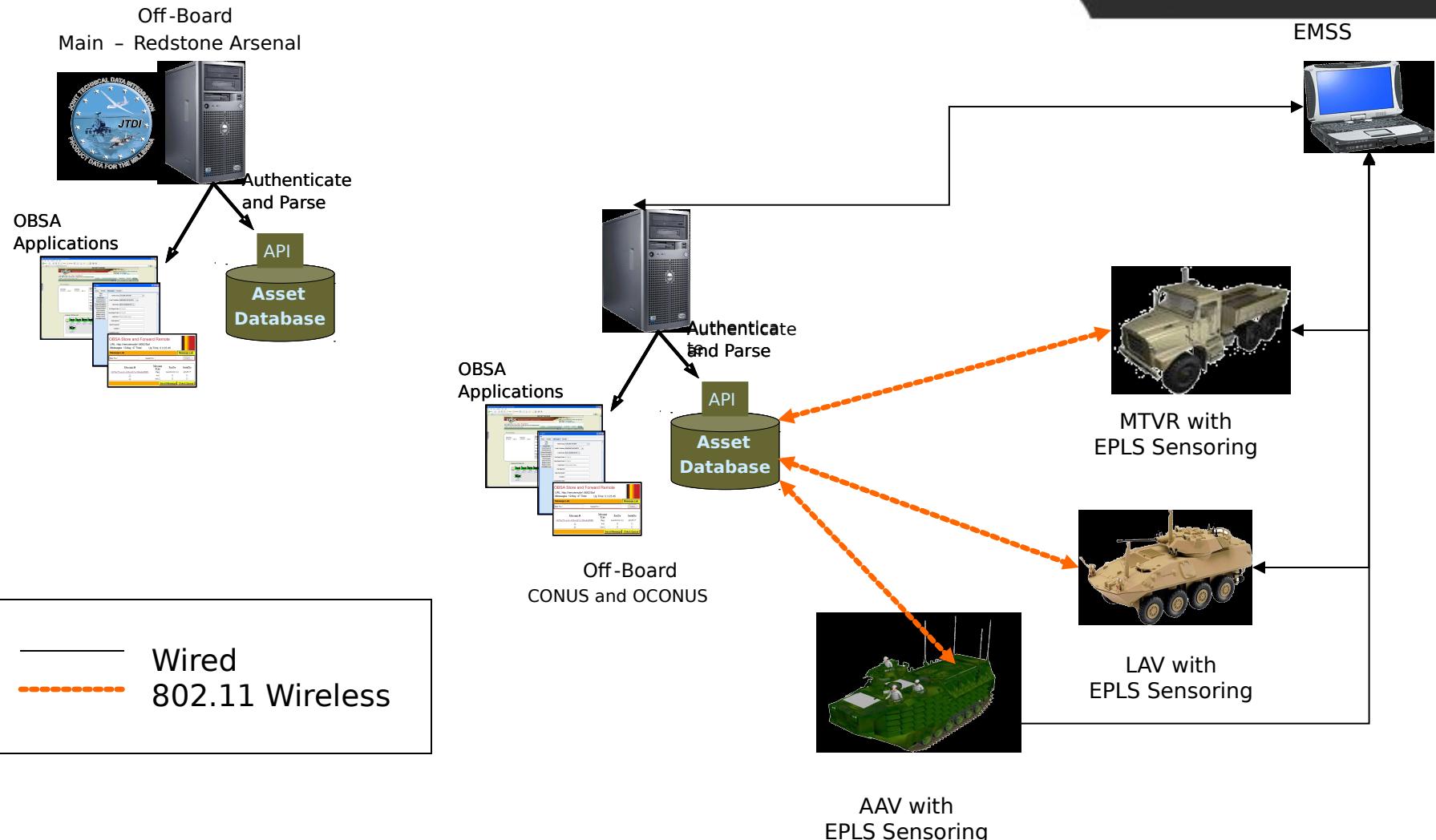
28XX

35XX

59XX



# EPLS / EMSS Interdependencies





# Incremental Approach

- **Block I**
  - EPLS
  - EMSS
  - CBM+
- **Block II**
  - SDE
  - Information exchanges with logistic systems
- **Block III**
  - Information Feeds to C2
- **ONR S&RL**
  - Technology development for transition to AL and GCSS
  - Development of S&RL ICD



# Questions

Eugene L. Morin  
Marine Corps Systems Command  
[Eugene.l.morin@usmc.mil](mailto:Eugene.l.morin@usmc.mil)  
703-432-3298